BY ORDER OF THE COMMANDER
HILL AIR FORCE BASE (AFMC)

HILL AFB INSTRUCTION 21-115

11 AUGUST 2000

Maintenance

OO-ALC DEPOT MAINTENANCE QUALITY ASSURANCE (QA)

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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Pages: 9

Distribution: F

This instruction implements *AFPD 21-1, Managing Aerospace Maintenance.* This publication establishes the policies, procedures, and assigns responsibilities to conduct quality assurance (QA) surveillance, evaluation, data collection and analysis, customer support, and other required quality administrative functions within the Ogden Air Logistics Center (OO-ALC). This publication augments the OO-ALC Quality System as defined *in Hill AFB Manual 21-113, Quality,* and satisfies specific requirements of *AFMCI 21-115, Depot Maintenance Quality Assurance, AFMCI 21-110, Depot Maintenance Technical Data and Work Control Document,* and *AFMCI 21-132, Depot Maintenance Technical Compliance Review Procedures.* This publication is applicable to all organic, contract, and Depot Maintenance Interservice Support Agreement (DMISA) workloads, and applies to all Depot Maintenance Activity Group (DMAG) organizations and Contract Field Teams (CFT) (when contractually specified) within OO-ALC, excluding the Precision Measurement Equipment Laboratory (PMEL) and software development.

1. INTRODUCTION:

1.1. The objective of this publication is to provide Center, product directorate (PD), and division managers with the oversight and visibility through autonomous surveillance and evaluations to improve the proficiency of the work force, facilitate continuous process improvement, and provide the customers with high quality aircraft, missiles, and other aerospace products and services on time and at the promised cost.

1.2. Quality assurance is an integral part of all production processes within OO-ALC. The Production Acceptance Certification (PAC) inspection and testing requirements to verify conformance, workmanship, operation, and system integrity are accomplished throughout the production processes. The PAC inspection and test requirements are mandated by specific workload requirements (customer), technical data, process orders, and work control documents (WCD) as defined by the PDs Pro-

duction Planning Teams. Although this instruction focuses on the QA functions at Center and PD-level, the production divisions maintain responsibility for product quality. The surveillance and evaluations conducted by the PDs quality organizations are to assess and measure the proficiency of the work force, compliance to technical data and other maintenance disciplines, workmanship, and product quality. The PDs are also responsible to maintain quality plans that comply with the requirements of *AFMCI 21-115*, this instruction, and *Hill AFB Manual 21-113.*

2. OO-ALC QA FOCAL POINT: The Logistics Quality Branch (OO-ALC/LGQ) Chief serves as the OO-ALC QA Focal Point and reports directly to the Director of the Logistics Management Directorate (OO-ALC/LG). Responsibilities include:

2.1. Develop this publication and the Center Quality Manual.

2.2. Plan, execute, analyze, and report QA activities described in this publication.

2.3. Facilitate the OO-ALC Quality Management Board (QMB).

2.4. Work with the AFMC/LGP QA Working Group and PD Focal Points on all QA issues and related taskings.

2.5. Review QA data quarterly and report to the OO-ALC QMB on internal and external quality status and issues.

2.6. Provide Center metrics to AFMC/LGP as detailed in *AFMCI 21-132, Depot Maintenance Technical Compliance Review Procedures.*

2.7. Annually Review Product Directorate (PD) Quality Assurance Plans (QAP).

2.8. Plan, coordinate, and execute the Center's annual Maintenance Standardization Evaluation Program (MSEP) inspection in accordance with *AFMCI 21-132*

2.9. Manage the Center Maintenance Stamp Program.

2.10. Manage the Center PAC and Special Skills Qualification (SSQ) Program.

3. QUALITY ASSURANCE SPECIALIST (QAS) TRAINING:

3.1. All QASs assigned to perform surveillance or evaluation tasks as outlined in Product Directorate (PD) Quality Assurance Plans (QAP) will be required to complete the core training requirements as detailed in AFMCI 21-115 and any additional training requirements stated in the PDs Quality Assurance Specialist (QAS) Training Plan prior to performing any independent surveillance or evaluations. They may perform these duties prior to training completion, if accompanied by a fully qualified QAS as part of their on-the-job (OJT) training. Core and QAS Training Plan requirements will be listed and tracked in the Education Management and Training System (EMTS).

3.2. Individual QAS training needs and special organizational training requirements will be identified by the PDs assigned supervisors and listed and tracked in the EMTS.

3.3. Production personnel selected to augment PD quality organizations will be required to complete the same training requirements as the QAS as stated in paragraph 3.1. The duties and limitations of QAS augmentees are detailed in paragraph 15 of this publication.

4. WAIVERS AND DEVIATIONS:

4.1. All requests for waivers or deviations from the QA requirements stated in *AFMCI 21-115* will be signed by the organization's director or deputy director and submitted to OO-ALC/LGQ for review.

4.2. OO-ALC/LGQ will coordinate all requests for waivers or deviations and will obtain the OO-ALC Commander's approval and signature prior to forwarding the request to HQ AFMC/LG, as required by *AFMCI 21-115.*

5. MINIMUM SURVEILLANCE AND EVALUATIONS ACTIVITY:

5.1. Product Directorate QAPs will state the minimum standard for the number and frequency (monthly, quarterly, etc.) of surveillance and evaluations accomplished within the PD.

5.2. Product Directorates must perform, as a minimum, the following types of quality assessments:

5.2.1. Quality Verification Inspections (QVI)

5.2.2. Core Inspections (CI)

5.2.3. Task Evaluations (TE)

5.3. The Quality Information Module (QIM), G015, will be used to store data accumulated during the above assessments. However, as of the date of this publication, G015 program development is not complete. In the interim, PDs should use some other existing or internally developed database program capable of storing and manipulating required data fields.

6. DATA COLLECTION AND ANALYSIS:

6.1. Product Directorates must, as a minimum, develop QA metrics as mandated in *AFMCI 21-132, Attachment 1*. Product Directorates will establish and document policies and procedures in their QAP or supporting OI for QA metric selection, monthly review forum, and analysis requirements.

6.2. Product Directorates will brief their QA metrics quarterly, during the OO-ALC Quality Management Board (QMB) meeting. The purpose of these briefings is to keep Center senior-level managers informed of the health and well being of QA programs, cross-feed information to all PDs, review and evaluate program performance, and develop program improvements. These briefings will be presented by the PDs director, deputy director, or designated representative.

6.3. Briefing charts developed by PDs will be provided to OO-ALC/LGQ two working days prior to the scheduled QMB. Chart formats and requirements are those imposed by the Commander's Action Group (CAG).

7. REQUESTS FOR QUALITY ASSISTANCE (RQAs):

7.1. RQAs are initiated by submitting an *AFMC Form 77, Request for Quality Assistance (RQA*), to the PDs quality organization. RQAs are used to evaluate areas of concern; (e.g., problems that impact product quality, deficiencies in products or processes, faulty material, etc.). RQAs are performed to gather information that may lead to problem solving and process improvement. RQAs will not be performed on subjects covered by the Master Labor Agreement.

7.2. Product Directorates will establish and document RQA procedures and responsibilities in their QAP or supporting OI.

8. CUSTOMER FEEDBACK:

8.1. Customer Support activities include procedures and responsibilities to process incoming Deficiency Reports (DR), and AFMC Form 79, Quality Feedback Review**.** Established procedures must comply with the requirements of *AFMCI 21-115, TO 00-35D-54,* U*SAF Deficiency Investigation and Reporting*, and *OPNAV 4790.2G, Naval Aviation Maintenance* (Navy aircraft workload within the Aircraft Directorate - OO-ALC/LA). Product Directorates will establish and document customer support activities in their QAP or supporting OI.

8.2. Corrective Action Requests (CAR) may be issued by on-site Defense Contract Management Agency (DCMA, formerly DCMC) quality inspectors, using *DD Form 1232, Quality Assurance Representative Correspondence. CARs* may be issued to document aircraft and commodity contractual product or process noncompliance issues found through product audits, process evaluations, or other inspections. The level of corrective action requested is based on the severity of noncompliance and process risk. Level one and Level two CARs are the most common; however, Level three and Level four CARs may be issued to contractor management for noncompliance issues of a more serious nature. Level one CARs may be issued in either verbal or written from for minor discrepancies. Level two CARs may be issued for contractual noncompliance issues that are systemic in nature, and could adversely affect cost, schedule, or performance if not corrected. Level one verbal CARs are generally corrected and closed on the spot and do not require a written response. Level one written and Level two written CARs require a response on writing within 20 calendar days of issue. Responses to a CAR must generally address the following: correct the defect (always required); screen the product for defects; determine the special or common cause of the defect and eliminate the cause; take action to prevent similar defects until corrective action is in place; and determine if the corrective action was effective.

8.2.1. Product Directorates will establish and document procedures and responsibilities in their QAP or supporting OI for processing CARs. PDs will establish a POC for CARs and provide name/office symbol to OO-ALC/LGQ.

8.2.2. OO-ALC/LGQ will act as the Center Point of Contact (POC) for all CARs issued by DCMA. CARs will be suspensed to the appropriate organization for corrective and preventative action; however, OO-ALC/LGQ will be responsible for CARs requiring a center-level response. The suspense assigned will be two working days less than DCMA's suspense of 20 calendar days. The suspensed organization will forward the CAR response back to OO-ALC/LGQ by the suspense date or request an extension through OO-ALC/LGQ. If the requested suspense date exceeds DCMA's suspense, OO-ALC/LGQ will contact DCMA for an extension request.

8.2.3. OO-ALC/LGQ will track all CARs and their suspense dates, review completed CARs for adequate corrective and preventative actions, ensure all deficiencies on the CAR have been addressed, and forward responses to DCMA. Any problems will be resolved with the appropriate level of management. The total number of CARs received in the last 12-months, those closed since the last QMB, and all open CARs will be briefed at the QMB as directed.

8.2.4. Follow-up on CAR corrective and preventative actions will be at the direction of the QMB.

9. QUALITY PLANNING:

9.1. QASs assigned to the PDs quality organization will act as the quality representative to all Production Planning Teams (PPT). These QA representatives will act as the liaison between the quality organization and members of the PPT during all phases of workload negotiations, pre-production, operational, and quality planning.

9.2. The QAS will keep members of the PPT appraised of all quality requirements contained in the statements of work, competitive workload contracts, or requirements identified during workload negotiations. Additionally, the QAS must ensure the quality requirements are incorporated into the WCDs.

9.3. The PDs will establish and document quality planning procedures that comply with the requirements of *AFMCI 21-115 and AFMCI 21-110* in the PD QAP or supporting OI.

10. PROCEDURES AND ROUTING OF AFMC FORM 343, QUALITY AS SURANCE ASSESSMENT: The *AFMC Form 343* will be used by the PDs to document all QVI, CI, TE, and Isolated Violations in accordance with *AFMCI 21-115.* Product Directorates will establish and document procedures in their QAP or supporting OI for form routing, processing, corrective/preventative action, review, and follow-up.

11. ISOLATED VIOLATIONS:

11.1. An isolated violation is an observed event or condition not related to a planned inspection/ assessment with safety implications or technical violations that may be considered unsafe, not in accordance with established procedures, and/or unfit to operate. An isolated violation consists of any condition not in compliance with established standards and will be corrected immediately. All observations by the QAS or augmentees involving a critical safety or technical violation will be stopped immediately.

11.2. Product Directorates will establish and document procedures in their QAP or supporting OI for Isolated Violation processing, corrective/preventative action, review, and follow-up.

12. Quality Verification Inspections (QVI):

12.1. A QVI is the technique used to assess and evaluate the health and well being of core production processes and products produced by OO-ALC.

12.2. A cadre of core production QVI candidates will be identified based on the PPT process, new workload requirements, customer reported defect information, or by recommendations of the PDs management. QVIs will be performed on a regular basis. The core QVI list of candidates will be reviewed and updated at least annually in conjunction with the annual review of the PD QAP or supporting OI.

12.3. Product Directorates will establish and document procedures in their QAP or supporting OI for QVI selection, processing, Quality Assurance Specialist (QAS) or augmentee quality inspection code "Q" clearance, corrective/preventative action, review, Quality Assessment Rating (QAR) criteria, and follow-up.

13. CORE AND OTHER INSPECTIONS:

13.1. Core Inspections (CI) assess maintenance disciplines common to all AFMC Depot Maintenance operations. AFMCI 21-115 mandates continuous evaluation of CIs for compliance to established Air Force, AFMC, Environmental Protection Act (EPA), and local publication requirements. Other inspections are those not listed in AFMCI 21-115 but directed by PD management.

13.2. Product Directorates will establish and document procedures in their QAP or supporting OI for Core Inspection selection, processing, corrective/preventative action, review, QAR criteria, and follow-up. Product Directorate QAPs or supporting OIs must also contain specific checklists for each Core Inspection.

14. TASK EVALUATIONS:

14.1. Task Evaluations (TEs) will be performed annually on all PAC certified personnel within OO-ALC in accordance with *AFMCI 21-115*. TEs assess the effectiveness of the PAC and the Special Skills Qualification (SSQ) Program. The TEs will determine worker knowledge and competence, ability to interpret and comply with technical data and WCD instructions, and ability to demonstrate knowledge and compliance with other maintenance and safety disciplines associated with their position.

14.2. Product Directorates will establish and document procedures in their QAP or supporting OI for Task Evaluation scheduling, accomplishment, QAR and pass/fail criteria, and corrective/preventative action.

15. OO-ALC QAS AUGMENTEE DUTIES AND LIMITATIONS:

15.1. A cadre of quality augmentees may be maintained by PD quality organizations in order to comply with requirements of this publication, meet special taskings and project requirements, and prevent production delays or work stoppage caused by lack of QAS support. Augmentees will be selected from within the PD work force. Workload and/or other special taskings and/or requirements will determine the number of augmentees and required skills.

15.2. Augmentees are required to fulfill all QAS training requirements as stated in paragraph 3 of this instruction (refer to paragraph 15.3.4 for exception).

15.3. Fully qualified QAS augmentees will be issued a "Q" stamp and are authorized to:

15.3.1. Perform TEs, core inspections, and other inspections, independently in all work areas outside their division, if skills qualified.

15.3.2. Perform TEs, core inspections, and other inspections within their division when accompanied by a qualified QAS (such as a team evaluation requiring more than one evaluator).

15.3.3. Perform other tasks they are deemed qualified for by the PD quality organization, as long as no conflict of interest or possible compromise of information is evident.

15.3.4. Clear QVI "Q" codes when a QAS is not available, in order to prevent production delays or work stoppage. Augmentees will not perform the QVI inspection. They will print “NI” (not inspected) next to the "Q" code, stamp the "Q" code with their "Q" stamp, and enter the date the code was cleared. When augmentees only clear “Q” codes to prevent production delays or work stoppage, they are not required to complete QAS training requirements.

15.4. Product Directorates will establish and document the authority and limitations of augmentees in their QAP or supporting OI.

GENE L. HATHENBRUCK
Director of Logistics Management

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFPD 21-1 Managing Aerospace Maintenance

AFMCI 21-110 Deport Maintenance Technical Data and Work Control Document

AFMCI 21-115 Deport Maintenance Quality Assurance

AFMCI 21-132 Depot Maintenance Technical Compliance Review Procedures

Hill AFB Manual 21-113 Quality

***A*bbreviations and Acronyms**

CAG Commanders Action Group

CAR Corrective Action Request

CFT Contract Field Teams

CI Core Inspection

DCMA Defense Contract Management Agency

DMAG Depot Maintenance Activity Group

DMISA Depot Maintenance Interservice Support Agreement

DR Deficiency Report

EMTS Education Management and Training System

EPA Environmental Protection Agency

MSEP Maintenance Standardization Evaluation Program

NI Not Inspected

OI Operating Instruction

OJT On-the-Job Training

OO-ALC Ogden Air Logistics Center

OO-ALC/LA Aircraft Directorate

OO-ALC/LG Logistics Management Directorate

OO-ALC/LGQ Logistics Quality Branch

PAC Production Acceptance Certification

PD Product Directorate

PMEL Precision Measurement Equipment Laboratory

POC Point of Contact

PPT Production Planning Team

QA Quality Assurance

QAP Quality Assurance Program

QAR Quality Assessment Rating

QAS Quality Assurance Specialist

QIM Quality Information Module

QMB Quality Management Board

QVI Quality Verification Inspection

RQA Request for Quality Assistance

SSQ Special Skills Qualification

TE Task Evaluation

WCD Work Control Document